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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/869,782

07/05/2001

Dieter Stimberg

STIRNBERG ET

8752

25889

7590

02/10/2003

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EXAMINER

WACHSMAN, HAL D

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 02/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

09/869,782



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: ASSISTANT COMMISSIONER FOR PATENTS

Washington, D.C. 20231

A handwritten signature in black ink, likely of the Assistant Commissioner for Patents.

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER
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DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Hal D Wachsman
Primary Examiner
Art Unit: 2857

Office Action Summary

Application No.

09/869,782

Applicant(s)

STIRNBERG ET AL.

Examiner

Hal D Wachsman

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 87-108 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 87-108 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The drawings are objected to by the Draftsperson's ^{sheet containing errors} for the reasons stated on the PTO-948 form. In addition, the Examiner objects to the drawings for the following reasons. There is no label on the first figure indicating that it is Figure 1. The figure that is figure 11 is not labeled as "Figure 11". Figures 2a and 2b contain a word from a foreign language ("und"). The drawing sheets for figures 3a, 3b, 10a and 10b, have the label "State of the art" therefore if what is shown in these figures were known in the prior art than these figures need to be labeled as "Prior Art". Appropriate correction is required.

2. The Cross Reference to Related Applications on page 1 of the specification indicates that priority under 35 U.S.C. 120 is being ^{Transferred} claimed for PCT/DE00/00067 filed January 4, 2000. However, the declaration does not make a claim for priority under 35 U.S.C. 120 and the bibliographic data sheet under the continuing data section states "THIS APPLICATION IS A 371 OF PCT/DE00/00067 01/04/2000". Appropriate explanation/correction is required.

3. The specification amendment to page 35 of the specification starting with the words "The figures 4 to 11 show...." in the second preliminary amendment filed on 10-25-01 is improper under 37 C.F.R. 1.121 because the clean copy of this amendment contains mark-ups (i.e. bracketing and underlining). Appropriate correction is required.

4. A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because due to the significant number of amendments made in which substitute paragraphs were made for paragraphs in the original specification in the first preliminary amendment followed by substitute paragraphs in the second preliminary

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amendment which substituted for substitute paragraphs in the first preliminary amendment, so as to facilitate the consideration and readability of the application. In addition, as the specification appears to be a translation of a foreign application, the Applicant is respectfully requested to review the specification for grammatical correctness. For example, page 2, line 2, of the specification cites "...Only an as far...".

A substitute specification filed under 37 CFR 1.125(a) must only contain subject matter from the original specification and any previously entered amendment under 37 CFR 1.121. If the substitute specification contains additional subject matter not of record, the substitute specification must be filed under 37 CFR 1.125(b) and must be accompanied by: 1) a statement that the substitute specification contains no new matter; and 2) a marked-up copy showing the amendments to be made via the substitute specification relative to the specification at the time the substitute specification is filed.

5. The Abstract cites "te spectrum" however is it the transmission spectrum that is actually being referred to here? The Abstract contains legal phraseology (i.e. "said methods") and purported merits (i.e. "...devices which are useful for..."). Appropriate correction is required.

6. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

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- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

7. From page 1 of the specification until page 8, line 10, of the specification, what is cited on these pages deals with the background of the invention however it has been labeled as part of the description. Appropriate correction is required.

8. On pages 21-22 of the specification is a brief description of the drawings but it has not been labeled as such. Also, this brief description of the drawings refers to a Figure 3 however there are actually figures 3a and 3b. The brief refers to a Figure 10 however there are actually figures 10a and 10b. Appropriate correction is required.

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9. The listing of references in the specification (see page 7, DE 198 38 301 A1) is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

The information disclosure statement filed 2-19-02 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. A copy of the Japan patent 004123932 was not found with the IDS art submitted.

The information disclosure statement filed 2-19-02 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered. The German patents 26 35 769 and 31 29 580 did not have a concise explanation of the relevance as described above and were not found cited on either the PCT 210 or PCT 409 documents provided from the international application.

10. Throughout the specification are references to claim numbers such as for example on page 8, third full paragraph where it states "...of the claims 87 respectively

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94,, " However, the specification should make no reference to claim numbers because if a patent application goes to issue at time of allowance the claims may be subjected to renumbering in which case the claim numbers referred to in the specification may be incorrect. Appropriate correction is required.

11. The Examiner notes that the Applicant's specification amendments have deleted the lead in paragraph to the new paragraph inserted on page 17 before line 19 which states "Such a generic device can be developed further....". This new paragraph now makes no sense because there is now not a paragraph before this that refers to a generic device. Appropriate correction is required.

Claim Rejections - 35 USC § 112

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 87-108 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The preamble of claim 87 cites "...quality of a probe gas (1), in particular a burnable gas..." which is indefinite because it is not clear what is the range of gases that the probe gas can be in addition to the burnable gas. This same type of problem also occurs in claim 94, lines 1-2. Throughout the claims are reference numerals such as "(1)" with respect to the probe gas. These reference numerals are not necessary and should be deleted. Claim 87, lines 5-6, cite "out of the spectrum the

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.....are determined at operating conditions" however did the Applicant intend this to be "determining at operating conditions out of the spectrum..." so as it is clear that it is a step of a method/procedure ? This same type of procedure step writing occurs in various locations of the claims. Claim 87, line 5, cites "the spectrum" however the antecedent basis is "transmission spectrum". This same type of problem also occurs in claim 92, line 1, claim 94, lines 10, 13, claim 95, line 3. In claim 87, the subscripts "i", "n", and "v" need to be defined. Claim 87, line 6, cites "operating conditions" however is this the same operating conditions already cited in the preamble of claim 87 ? This same type of problem also occurs in claim 87, line 9, claim 90, line 2, claim 91, line 3, claim 92, lines 2-3, claim 94, lines 7-9, claim 95, line 2, claim 96, lines 3, 4, claim 97, lines 3, 4. Claim 87, line 8, cites "the wanted compressibility factor K" which lacks clear antecedent basis. This same type of problem also occurs in claim 94, line 6. Claim 87, line 10, cites "substance specific quantities" but of what ? Claim 87, line 11, cites "the selected default values" which it appears should be "the preset default values". Claim 87, line 12, cites "input quantities" but of what exactly ? Claim 87, line 15, cites "standard-arithmetic procedures" which is vague as to exactly what types of procedures are being referred to here. Claim 87, lines 18-19, cite "than there from" but from what exactly ? All the claims that depend from claim 87 cite "Procedure according to..." which it appears should be "The procedure according to...". Claim 88 refers to an industry standard procedure AGA8-92DC which is indefinite since the organizations implementing standards meet regularly and have the authority to modify standards, any connection a claim may have to these standards may have varying scope over time. In

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addition, if the standard changes, then the disclosure may no longer support the limitation. This same type of problem also occurs in claims 89 and 94. Claim 90, line 2, cites "the infrared active components of the probe gas" which lacks clear antecedent basis. This same type of problem also occurs in claim 92, line 2. Claim 90, line 3, cites "the recorded spectrum" which lacks antecedent basis. Claim 91, line 2, cites "und" which should be "and". In claim 91, line 3, the subscript "b" needs to be defined. In claim 94 the subscripts "n", "b" and "v" needs to be defined. All the claims that depend from claim 94 cite "Procedure according to.." which should be "The procedure according to...". Claim 94, line 13, cites "a further absorption band of the spectrum" however there was never a first absorption band of the spectrum cited in the claim. In claim 96, lines 3-4, it is not clear why a different variable letter is being used to represent the density as compared to the density cited in claim 95.

Claims 98-108 are hybrid claims (see Ex parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990) that are claims that claim both an apparatus and the method steps of using the apparatus. If we look at claim 98 it states "Photometric device for the determination of a transmission spectrum of a probe gas (1), especially for carrying out one of the procedures according to claim 87..." which is then followed by a variety of apparatus limitations while also claiming carrying out the steps of the procedure of claim 87. Thus, there is ambiguity as to whether this claim is directed toward the photometric device and a procedure/method for using the photometric device. Claim 98, line 2, cites "one of the procedures according to claim 87" however claim 87 is directed towards a single procedure for the determination of the quality of gas. Claim 98, line 8, cites "a

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transmission spectrum" however is this the same transmission spectrum already cited in the preamble of the claim ? The use of the pronoun "their" in claim 98, line 10, adds vagueness with respect to what actually possesses the selective transmission behaviour. Claim 98, lines 10-11, cite "the spectrum" however the antecedent basis is "transmission spectrum". Claim 98, line 11, cites "the radiation receiver" however the antecedent basis is "at least one radiation receiver". Claim 98, line 16, cites "the whole spectrum" which should be "the whole transmission spectrum". All the claims that depend from claim 98 cite "Photometric device according to..." which it appears should be "The photometric device according to...". Claim 99, lines 1-2, cite "...the chopper arrangement...provides such a transmission behavior, that ..." however exactly what is the transmission behavior that results in the suitable transmitted spectral regions ? Claim 99, line 3, cites "...by procedures of the direct spectral evaluation..." but exactly what procedures are being referred to here ? In addition, "the direct spectral evaluation" lacks antecedent basis. Claim 100, lines 1-2, cite "the released wavelength" however the antecedent basis is "release of the regions of the wavelength". Claim 102, line 2, cites "the sector element groups" which it appears should be "the first and second sector element groups". This same type of problem also occurs in claim 103, lines 3-4, claim 104, line 2. Claim 102, line 3, cites "first optical waveguide..and second optical waveguide" however there is already antecedent basis for this so "said" or "the" is missing before "first optical waveguide" and before "second optical waveguide". Claim 102, line 4, cites "...a dispersive element..., preferably a monochromator..." which is indefinite because it is not clear whether the range of dispersive elements is limited to a

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monochromator or what other dispersive elements it can be. Claim 104, line 3, cites "that optical waveguide" which should be "that first optical waveguide". Claim 104, line 5, cites "the device" which it appears should be "the photometric device". Claim 105, line 2, cites "the sector elements" however are these the sector elements of the first and second sector element groups ? Claim 105, line 3, cites "the second waveguide" which should be "the second optical waveguide". Claim 105, lines 3-4, cite "the one or more filters (21) or the dispersive element" which lacks antecedent basis. Claim 105, lines 4-5, cite "further sector element groups" however is this referring to the two groups of sector elements ? Claim 106, lines 1-2, cite "the measurement radiation... which is each released" however there is only one measurement radiation. Claim 106, lines 3 and 4, cite "the first and the second waveguide" which should be "the first and second optical waveguides". Claim 107, line 2, cites "the spectrum" which should be "the transmission spectrum". Claim 107, line 3, cites "the waveguides" which should be "the first and second optical waveguides". Claim 108, line 1, cites "according to one of the claims 101" however there is only a single claim 101. Claim 108, line 2, cites "infrared inactive gas, preferably nitrogen" which is indefinite because it is not clear if the range of the infrared inactive gas is just limited to nitrogen or what other gases it can be. Claim 108, line 3, cites "the compensation of dirt accumulation or the same" but the same what is being referred to here ? Claim 108, line 4, cites "the device" which should be "the photometric device".

Claim Rejections - 35 USC § 101

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14. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

15. Claims 98-108 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As already shown above in paragraph 13, these claims are directed to neither "a process" nor "a machine" but rather embrace or overlap two different statutory classes of inventions as set forth in 35 U.S.C. 101 which was drafted so as to set forth the statutory classes of invention in the alternative only.

16. The following references are cited as being art of general interest: Dayton et al. which disclose determining the thermodynamic properties of a gas medium without making a determination of gas composition, Kolpak which discloses the measurement of gas properties and Pinvidic et al. which disclose determining the calorific value of a natural gas.


17. No claims are allowed.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal D Wachsman whose telephone number is 703-305-9788. The examiner can normally be reached on Monday to Friday 7:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 703-308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Hal D Wachsman
Primary Examiner
Art Unit 2857

HW
February 5, 2003